CLAIMS

What is claimed is:

1. A system comprising:

a network including a plurality of components; and

a controller coupled to the network and operative to automatically configure the components of the network to perform a combined action.

2. The system of claim 1 wherein the controller defines relationships between the components to configure them to perform a combined action.

3. The system of claim 1 wherein each resource is one of hardware and software.

4. The system of claim 1 wherein the action includes providing a network service.

5. The system of claim 1 wherein the controller automatically configures the network in response to detecting an event.

6. The system of claim 5 wherein the event is generated in response to automatically detecting increased network usage.

7. The system of claim 6 wherein the network includes a plurality of resources, the controller assigning additional resources to provide a network

service that is already being provided by other resources in response to the event.

8. The system of claim 5 wherein the event is generated in response to the controller detecting demand for a new network service.

9. The system of claim 8 wherein the demand for the new network is issued in response to a command issued by a user of the system.

10. The system of claim 1, further comprising:

a console coupled to the controller operative to provide an interface that allows a human user to interact with the controller.

11. A method comprising:

logically grouping a plurality of components at a data center into a single meta-server;

defining one or more hierarchical relationships between each of said components including one or more associations, dependencies and/or prerequisites, said hierarchical relationships providing information related to network operations at said data center; and

using said information for one or more network management functions at said data center.

12. The method as in claim 11 wherein a first one of said defined hierarchical relationships comprise:

a first zone or resource collection comprised of a first subset of said plurality of components.

13. The method as in claim 12 wherein a second zone or resource collection of said defined hierarchical relationships comprise:

a second zone comprised of a second subset of said plurality of components.

14. The method as in claim 13 wherein a third one of said defined hierarchical relationships comprise:

an interconnect logically connecting said first zone and said second zone.

15. The method as in claim 12 wherein one of said components grouped within said first zone is a Web server.

16. The method as in claim 13 wherein one of said components grouped in both said first zone and said second zone is a firewall.

17. The method as in claim 11 wherein one of said components is a router.

18. The method as in claim 11 wherein one of said network management functions is to initialize one or more of said system components at said data center and said defined hierarchical relationships between each of said system components is used to determine an appropriate order in which to initialize said one or more components.

19. The method as in claim 18 wherein initializing comprises rebooting one or more of said system components.

20. The method as in claim 18 wherein initializing comprises restarting one or more of said system components.

21. The method as in claim 18 wherein initializing comprises reconfiguring one or more of said system components.

22. A meta-server comprising:

a plurality of front end Web servers to process client requests for Web pages;

a plurality of back-end servers to perform various back-end processing functions associated with said client requests;

a controller to define one or more logical hierarchical relationships between each of said components including one or more associations, dependencies and/or prerequisites, said hierarchical relationships providing information related to network operations at said data center and to use said information for one or more network management functions at said data center.

23. The meta-server as in claim 22 further comprising:

a firewall communicatively coupled between said front-end Web servers and said back-end servers to analyze and filter data traffic directed towards said back end servers,

said controller further defining one or more additional logical hierarchical relationships between said firewall and said front-end and/or said back-end servers.

24. The meta-server as in claim 23 further comprising:

a router communicatively coupled between said front-end Web servers, said back-end servers and an external network, said router to process data traffic according to a network addressing protocol,

said controller further defining one or more additional logical hierarchical relationships between said router, said front-end servers, said back-end servers and/or said firewall.

25. The meta-server as in claim 22 wherein said front-end servers and said back-end servers are physically configured within a single unitized platform.

26. The meta-server as in claim 25 wherein said front-end servers and said back-end servers communicate over a dynamically configurable backplane bus.

27. The meta-server as in claim 22 wherein said defined hierarchical relationships comprise a first zone including said front-end Web servers, a second zone including said back-end servers, and an interconnect logically coupling said first zone with said second zone.

28. The meta-server as in claim 24 wherein said defined hierarchical relationships comprise a first zone including said front-end Web servers, a second zone including said back-end servers, an interconnect logically coupling said first zone with said second zone, and an interconnect resource comprised of said firewall.

29. An article of manufacture including program code which, when executed by a machine, cause said machine to perform the operations of:

logically grouping a plurality of components at a data center into a single meta-server;

defining one or more hierarchical relationships between each of said components, said hierarchical relationships providing information related to network operations at said data center; and

using said information for one or more network management functions at said data center.

30. The article of manufacture as in claim 29 wherein a first one of said defined hierarchical relationships comprise:

a first zone comprised of a first subset of said plurality of components.

31. The article of manufacture as in claim 30 wherein a second one of said defined hierarchical relationships comprise:

a second zone comprised of a second subset of said plurality of components.

32. The article of manufacture as in claim 31 wherein a third one of said defined hierarchical relationships comprise:

an interconnect logically connecting said first zone and said second zone.

33. The article of manufacture as in claim 30 wherein one of said components grouped within said first zone is a Web server.

34. The article of manufacture as in claim 31 wherein one of said components grouped in both said first zone and said second zone is a firewall.

35. The article of manufacture as in claim 29 wherein one of said components is a router.

36. The article of manufacture as in claim 29 wherein one of said network management functions is to initialize one or more of said system components at said data center and said defined hierarchical relationships between each of said system components is used to determine an appropriate order in which to initialize said one or more components.

37. The article of manufacture as in claim 36 wherein initializing comprises rebooting one or more of said system components.

38. The article of manufacture as in claim 36 wherein initializing comprises restarting one or more of said system components.

39. The article of manufacture as in claim 36 wherein initializing comprises reconfiguring one or more of said system components.

40. A method comprising:

defining one or more logical hierarchical relationships between a plurality components on a network including one or more associations, dependencies and/or prerequisites, said logical hierarchical relationships providing information related to network operations; and

executing a simulation of said network operations based on said hierarchical relationships between said components.

41. The method as in claim 40 further comprising:

storing different groups of said logical hierarchical relationships into one or more tool sets, said tool sets usable for conducting said simulation.

42. The method as in claim 41 further comprising:

using results of said simulation to design additional logical hierarchical relationships between said components.

43. The method as in claim 42 wherein designing additional logical hierarchical relationships comprises optimizing said logical hierarchical relationships between said components.

44. The method as in claim 42 wherein said additional logical hierarchical relationships are designed responsive to an inclusion of new components on said network.

45. A network management architecture defined by a series of abstractions comprising:

a plurality of network resources;

one or more services, each comprised of a specified set of said network resources;

a service collection comprised of two ore more services; and

a user interface providing information related to and control over said service collection, said services, and/or said network resources to a user.

46. The network management architecture as in claim 45 wherein one of said resources is a Web server.

47. The network management architecture as in claim 46 wherein one of said resources is a load balancer.

48. The network management architecture as in claim 47 wherein said Web server and said load balancer both are included in a particular service.

49. The network management architecture as in claim 46 wherein said Web server is included in a particular service with a plurality of other Web servers.

50. The network management architecture as in claim 45 wherein said user is provided with differing levels of access to said service collection, said services, and/or said network resources, depending on a user group to which said user belongs.

51. The network management architecture as in claim 50 wherein said user is provided with access to specified objects, properties and/or methods of one or more of said services, service groups and/or resources based on access privileges of said user group.

52. The network management architecture as in claim 51 wherein said user interface dynamically displays to said user only those specified objects, properties and/or methods to which said user is permitted access.